Vinyl acetate

Version	Revision Date:	SDS Number:	Date of last issue: 2022/01/24
1.2	2023/06/26	000000033649	Date of first issue: 2019/04/24

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Vinyl acetate

Product code : 000000000051030780

Manufacturer or supplier's details

Company : Celanese (Shanghai) International Trading Co., Ltd

Address : 4560 Jinke Road, Zhangjiang, Pudong
Shanghai, China 201210

Telephone : 86-21-38619288

Emergency telephone number : CHEMTREC International phone number: +1-703-527 3887, +86 532 8388-9090 (China, 24h)

E-mail address : HazCom@celanese.com

Recommended use of the chemical and restrictions on use

Recommended use : Monomer
Restrictions on use : None known.

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance : liquid
Colour : colourless
Odour : fruity, sweet

Highly flammable liquid and vapour. May be harmful if swallowed. Harmful if inhaled. May cause respiratory irritation. Suspected of causing cancer. Harmful to aquatic life with long lasting effects.

GHS Classification

Flammable liquids : Category 2

Acute toxicity (Oral) : Category 5

Acute toxicity (Inhalation) : Category 4

Carcinogenicity : Category 2

Specific target organ toxicity - single exposure : Category 3 (respiratory tract irritation)

Short-term (acute) aquatic hazard : Category 3

Long-term (chronic) aquatic hazard : Category 3

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements :
H225 Highly flammable liquid and vapour.
H303 May be harmful if swallowed.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H351 Suspected of causing cancer.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements :

Prevention:

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ ventilating/ lighting equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P284 Wear respiratory protection.

Response:

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
P312 Call a POISON CENTER/ doctor if you feel unwell.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P403 + P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Physical and chemical hazards

Highly flammable liquid and vapour.

Health hazards

May be harmful if swallowed. Harmful if inhaled. Suspected of causing cancer. May cause respiratory irritation.

Environmental hazards

Harmful to aquatic life. Harmful to aquatic life with long lasting effects.

Other hazards which do not result in classification

None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance

Components

Chemical name	CAS-No.	Concentration (% w/w)
Vinyl acetate	108-05-4	>= 99.9

4. FIRST AID MEASURES

General advice : Remove contaminated, soaked clothing immediately and dispose of safely
Pay attention to own protection
In any case show the physician the Safety Data Sheet
Move out of dangerous area.
Consult a physician.
Show this safety data sheet to the doctor in attendance.
Symptoms of poisoning may appear several hours later.
Do not leave the victim unattended.

If inhaled : Keep at rest.
Move to fresh air.
Call a physician or poison control centre immediately.
Call a physician or poison control centre immediately.
If unconscious, place in recovery position and seek medical advice.

In case of skin contact : Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
If symptoms persist, call a physician.
If on skin, rinse well with water.
If on clothes, remove clothes.

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Call a physician immediately.
Flush eyes with water as a precaution.

		Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.
If swallowed	:	Rinse with plenty of water. If conscious, drink plenty of water. If swallowed, do not induce vomiting - seek medical advice. Keep respiratory tract clear. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital.
Most important symptoms and effects, both acute and delayed	:	Vapours may cause irritation to the eyes, respiratory system and the skin. Gastrointestinal discomfort Respiratory disorder May be harmful if swallowed. Fatal if inhaled. Harmful if inhaled. May cause respiratory irritation. Suspected of causing cancer.
Notes to physician	:	Treat symptomatically In case of lung irritation, first treatment with dexametason aerosol (spray). Treat symptomatically.

5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Foam Dry chemical Carbon dioxide (CO2)
Specific hazards during fire-fighting	:	Do not use a solid water stream as it may scatter and spread fire. Do not allow run-off from fire fighting to enter drains or water courses.
Specific extinguishing methods	:	Cool containers/tanks with water spray. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. For safety reasons in case of fire, cans should be stored separately in closed containments. Use a water spray to cool fully closed containers.
Special protective equipment for firefighters	:	Self-contained breathing apparatus (EN 133) Wear self-contained breathing apparatus for firefighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Avoid contact with the skin and the eyes. Keep away from heat and sources of ignition. Provide adequate ventilation. Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
Environmental precautions	:	Prevent further leakage or spillage. Do not flush into surface water. Do not allow uncontrolled discharge of product into the environment. Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	:	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal. Dispose of in accordance with local regulations. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

7. HANDLING AND STORAGE

Handling

Local/Total ventilation	:	Ensure adequate ventilation.
Advice on protection against fire and explosion	:	Keep away from heat and sources of ignition. No smoking. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Ground/bond container and receiving equipment. Do not spray on a naked flame or any incandescent material. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Use only explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition.
Advice on safe handling	:	Provide sufficient air exchange and/or exhaust in work rooms. Avoid formation of aerosol. Do not breathe vapours/dust. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes.

For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Take precautionary measures against static discharges.
Provide sufficient air exchange and/or exhaust in work rooms.
Open drum carefully as content may be under pressure.
Dispose of rinse water in accordance with local and national regulations.

Avoidance of contact : Oxidizing agents
Strong acids
Amines

Storage

Conditions for safe storage : Keep in a dry, cool and well-ventilated place.
Store locked up.
Handle and open container with care
Store at temperatures not exceeding 38°C / 100 °F
Prevent unauthorized access.
No smoking.
Keep container tightly closed in a dry and well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Observe label precautions.
Electrical installations / working materials must comply with the technological safety standards.

Materials to avoid : Oxidizing agents
polymerisation initiators
Acids
Amines

Recommended storage temperature : 30 °C

Further information on storage stability : No decomposition if stored and applied as directed.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Vinyl acetate	108-05-4	PC-TWA	10 mg/m3	CN OEL
	Further information: G2B - Possibly carcinogenic to humans			
		PC-STEL	15 mg/m3	CN OEL
	Further information: G2B - Possibly carcinogenic to humans			
		TWA	10 ppm	ACGIH
		STEL	15 ppm	ACGIH
Substances for which there are Community workplace exposure limits.				
Vinyl acetate	108-05-4	PC-TWA	10 mg/m3	CN OEL
	Further information: G2B - Possibly carcinogenic to humans			
		PC-STEL	15 mg/m3	CN OEL

	Further information: G2B - Possibly carcinogenic to humans			
		TWA	10 ppm	ACGIH
		STEL	15 ppm	ACGIH

Personal protective equipment

Respiratory protection	:	Recommended Filter type:
Filter type	:	Organic vapour type
Eye/face protection	:	Tightly fitting safety goggles In addition to goggles, wear a face shield if there is a reasonable chance for splash to the face. Equipment should conform to EN 166.
Skin and body protection	:	Impervious clothing Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Hand protection		
Material	:	butyl-rubber
Break through time	:	240 min
Glove thickness	:	0.7 mm
Protective index	:	Class 5
Remarks	:	Protective gloves The suitability for a specific workplace should be discussed with the producers of the protective gloves.
Hygiene measures	:	Do not smoke. Provide adequate ventilation. Avoid contact with skin, eyes and clothing. When using do not eat or drink. When using do not smoke. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	liquid
Colour	:	colourless
Odour	:	fruity, sweet
Odour Threshold	:	0.12 ppm
pH	:	neutral
Melting point/range	:	-93.2 °C
Boiling point/boiling range	:	72.7 °C (1,013 hPa)
Flash point	:	-8 °C Method: closed cup

Evaporation rate	:	8.9
Upper explosion limit / Upper flammability limit	:	13.4 %(V)
Lower explosion limit / Lower flammability limit	:	2.6 %(V)
Vapour pressure	:	445 hPa (50 °C)
Relative vapour density	:	3.0 (Air = 1.0)
Density	:	0.932 g/cm³ (20 °C)
Solubility(ies)		
Water solubility	:	20 g/l (20 °C)
Solubility in other solvents	:	miscible Solvent: Acetone miscible Solvent: Benzene miscible Solvent: Diethylether miscible Solvent: Ethanol soluble Solvent: Chloroform
Partition coefficient: n-octanol/water	:	log Pow: 0.73 measured data
Temperature of Polymerisation (SAPT)	:	> 50 °C
Viscosity		
Viscosity, dynamic	:	0.42 - 0.43 mPa.s (20 °C)
Explosive properties	:	not applicable based on consideration of the structure
Oxidizing properties	:	not applicable based on consideration of the structure
Surface tension	:	23.95 mN/m, 20 °C
Molecular weight	:	86.09 g/mol

10. STABILITY AND REACTIVITY

Reactivity	:	Stable under normal conditions.

		No decomposition if stored and applied as directed.
Chemical stability	:	No decomposition if used as directed. Decomposes on heating.
Possibility of hazardous reactions	:	Violent polymerisation may be caused by: Heating above the decomposition temperature No decomposition if stored and applied as directed. Vapours may form explosive mixture with air.
Conditions to avoid	:	Do not expose to temperatures above: 30 °C Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Heat, flames and sparks.
Incompatible materials	:	Oxidizing agents Strong acids Amines
Hazardous decomposition products	:	No hazardous decomposition products are known.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

May be harmful if swallowed.
Harmful if inhaled.

Components:

Vinyl acetate:

Acute oral toxicity	:	LD50 (Rat): 3,500 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): 15.810 mg/m3 Exposure time: 4 h Test atmosphere: vapour
Acute dermal toxicity	:	LD50 (Rabbit, male): 7,440 mg/kg

Skin corrosion/irritation

Not classified based on available information.

Components:

Vinyl acetate:

Species	:	Rabbit
Method	:	OECD Test Guideline 404
Result	:	No skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Remarks	:	Vapours may cause irritation to the eyes, respiratory system and the skin.

Components:

Vinyl acetate:

Species	:	Rabbit
Result	:	No eye irritation
Method	:	OECD Test Guideline 405

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Components:

Vinyl acetate:

Species	:	Mouse
Method	:	OECD Test Guideline 429
Result	:	Not a skin sensitizer.

Germ cell mutagenicity

Not classified based on available information.

Components:

Vinyl acetate:

Genotoxicity in vitro	:	Test Type: Ames test Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471 Result: negative Test Type: Chromosome aberration test in vitro Test system: human lymphoblastoid cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 473 Result: positive Method: OECD Test Guideline 487 Result: positive
Genotoxicity in vivo	:	Test Type: Micronucleus test Species: Mouse Method: OECD Test Guideline 474 Remarks: ambiguous Species: Mouse Result: negative

Carcinogenicity

Suspected of causing cancer.

Components:

Vinyl acetate:

Species	:	Rat
Application Route	:	Inhalation
Exposure time	:	104 weeks
	:	0.176 mg/l
Result	:	positive

Species	:	Rat
Application Route	:	Oral
Exposure time	:	104 weeks
	:	31 mg/kg food
Result	:	positive

Reproductive toxicity

Not classified based on available information.

Components:

Vinyl acetate:

Effects on fertility	:	Species: Rat Application Route: Oral General Toxicity - Parent: NOAEL: 1,000 mg/kg body weight Method: OECD Test Guideline 416 Result: No toxicity to reproduction
Effects on foetal development	:	Species: Rat Application Route: Inhalation and oral drinking water Developmental Toxicity: 200 Method: OECD Test Guideline 414 Result: no adverse developmental effects

STOT - single exposure

May cause respiratory irritation.

STOT - repeated exposure

Not classified based on available information.

Repeated dose toxicity

Components:

Vinyl acetate:

Species	:	Rat
NOAEL	:	281 mg/kg
Application Route	:	Oral
Method	:	OECD Test Guideline 408

Species	:	Rat
NOAEL	:	0.176 mg/l
Application Route	:	Inhalation
Method	:	OECD Test Guideline 453

Aspiration toxicity

Not classified based on available information.

Further information

Product:

Remarks : Solvents may degrease the skin.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Vinyl acetate:

Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 12.6 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	EC50 (Pseudokirchneriella subcapitata (microalgae)): 12.7 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
Toxicity to fish (Chronic toxicity)	:	NOEC (Pimephales promelas (fathead minnow)): 0.16 mg/l Exposure time: 34 d Method: OECD Test Guideline 210
Toxicity to microorganisms	:	EC3 (Pseudomonas putida): 6 mg/l Exposure time: 16 h

Persistence and degradability

Components:

Vinyl acetate:

Biodegradability	:	MITI Test Inoculum: activated sludge Result: Readily biodegradable. Method: OECD Test Guideline 301C

Bioaccumulative potential

Components:

Vinyl acetate:

Bioaccumulation	:	Remarks: Does not bioaccumulate.

Mobility in soil

No data available

Other adverse effects

Product:

Additional ecological information	:	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic life with long lasting effects.

Components:

Vinyl acetate:

Results of PBT and vPvB assessment	:	The substance does not meet the criteria for PBT / vPvB according to REACH, Annex XIII

13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	:	Dispose of in accordance with local regulations. The Waste code should be assigned in discussion between the user, the producer and the waste disposal company. The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.
Contaminated packaging	:	Empty remaining contents. Dispose of as unused product. Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum.

14. TRANSPORT INFORMATION

International Regulations

UNRTDG

UN number	:	UN 1301
Proper shipping name	:	VINYL ACETATE, STABILIZED
Class	:	3
Packing group	:	II
Labels	:	3

IATA-DGR

UN/ID No.	:	UN 1301
Proper shipping name	:	Vinyl acetate, stabilized
Class	:	3
Packing group	:	II
Labels	:	Flammable Liquids
Packing instruction (cargo aircraft)	:	364

Packing instruction (passenger aircraft) : 353

IMDG-Code

UN number	:	UN 1301
Proper shipping name	:	VINYL ACETATE, STABILIZED
Class	:	3
Packing group	:	II
Labels	:	3
EmS Code	:	F-E, S-D
Marine pollutant	:	no
Remarks	:	Transport in accordance to special provision 386

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

GB 6944/12268

UN number	:	UN 1301
Proper shipping name	:	VINYL ACETATE, STABILIZED
Class	:	3
Packing group	:	II
Labels	:	3

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

15. REGULATORY INFORMATION

National regulatory information

Law on the Prevention and Control of Occupational Diseases

Regulations on Safety Management of Hazardous Chemicals

Catalogue of Hazardous Chemicals : Listed

Identification of Major Hazard Installations for Hazardous Chemicals (GB 18218)

No. / Code	Chemical name / Category	Threshold quantity
W5.3	Flammable liquids	1,000 t

Hazardous Chemicals for Priority Management under SAWS : Listed

16. OTHER INFORMATION

Date format : yyyy/mm/dd

Full text of other abbreviations

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
CN OEL	:	Occupational exposure limits for hazardous agents in the workplace - Chemical hazardous agents.

ACGIH / TWA	:	8-hour, time-weighted average
ACGIH / STEL	:	Short-term exposure limit
CN OEL / PC-TWA	:	Permissible concentration - time weighted average
CN OEL / PC-STEL	:	Permissible concentration - short term exposure limit

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

CN / EN